

WHAT IS CLAIMED IS:

1. A magnetizer of a DC motor comprising:
 - a case;
 - a hemispherical permanent magnet provided within the case;
 - 5 a non-magnetic member provided below the hemispherical permanent magnet; and
 - a coil provided to the non-magnetic member.
2. The magnetizer according to claim 1, wherein the internal portion of the permanent magnet is the one magnetic pole out of the N and S magnetic poles and the external portion of the permanent magnet is the other magnetic pole.
3. The magnetizer according to claim 1, wherein distribution of the magnetic field varies depending on the structure of the non-magnetic member.
4. A magnetizer of a DC motor comprising:
 - a case;
 - 20 a hemispherical-shell permanent magnet provided within the case;
 - a non-magnetic member provided below the hemispherical-shell permanent magnet; and
 - a coil provided to the non-magnetic member.

5. The magnetizer according to claim 4, wherein the internal portion of the hemispherical-shell permanent magnet is the one magnetic pole out of the N and S magnetic poles and the external portion of the hemispherical-
5 shell permanent magnet is the other magnetic pole.

6. The magnetizer according to claim 4, wherein distribution of the magnetic field varies depending on the structure of the non-magnetic member.

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7. A magnetizer of a DC motor comprising:
a case;
a spherical permanent magnet constructed with two hemispherical permanent magnets being arranged to face each other, the spherical permanent magnet being provided within the case;
15 non-magnetic members provided below a upper one and above a lower one of the two hemispherical permanent magnets; and
coils provided to the respective non-magnetic members.

20 8. The magnetizer according to claim 7, wherein the internal portion of the permanent magnet is the one magnetic pole out of the N and S magnetic poles and the external portion of the permanent magnet is the other magnetic pole.

9. The magnetizer according to claim 7, wherein distribution of the magnetic field varies depending on the structure of the non-magnetic member.